Wisconsin Urban & Community Forests
A Quarterly Newsletter of the Wisconsin Department of Natural Resources, Forestry Division

Using Purdue's Emerald Ash Borer Cost Calculator

by Cliff Sadoff
Department of Entomology, Purdue University

A Web-based cost calculator is available to help urban foresters make decisions about ash tree management related to emerald ash borer. The calculator uses a size-class–based tree inventory to project future forest size, as well as costs for any combination of three ash management options: insecticide treatment, tree removal, or removal plus replacement. Costs are projected over a 25-year period and are based on local bid prices for each management option. Losing ash trees is likely to change the appearance of your city streets. We suggest using the calculator to explore the costs of management options to help you decide what you can afford. Although the benefits of trees are critical to the decision making process they are beyond the scope of the calculator at this time.

EAB and management options

All ash trees native to North America are susceptible to EAB attack. Individual ash trees can be protected with repeated applications of systemic insecticides. Healthy trees whose canopies have not yet thinned are most likely to respond positively to insecticide treatments. Longevity of protection provided by a single insecticide application ranges from one to three years and depends on the compound, dose and solubility of the insecticide formulation. (Editor's note: For more information about pesticides for EAB control see http://emeraldashborer.wi.gov/articleassets/InsecticideOptionsForProtectingTreesFromEAB.pdf.)

Accessing the EAB Cost Calculator

The EAB Cost Calculator is available at http://extension.entm.purdue.edu/treecomputer/index.php. First-time users are asked to enter a user name and password. We ask for a password to protect the information about your forest and allow you to update or access it at your convenience. Users are also asked to enter their name, state, e-mail and zip code. The name you enter will appear on the title page of the report the calculator produces. We use your e-mail to send you updates when changes are made to the calculator. Please be assured that your personal information will not be shared or sold to any third party. There is a link to a tutorial at the bottom of the first page with screen shots to help guide you through entering your information into calculator.

Using the calculator

Entering Information about Your Forest. Using the menu bar on the right, select Forests and enter the size-based inventory data for your ash trees. I suggest first selecting the ***Demo*** forest to see what the data should look like; then select ***New Forest*** to input your own data. After selecting New Forest, you must give it a name. Then go to the Input option and choose Tree Size Class Distribution to enter the number of trees in each size category for your forest. You can change the range of each size class by typing over the numbers in the size boxes. Be sure to save the information before you leave the screen. You can enter data on up to 15 forests with each account you create. If you need to run estimates on more forests, just set up a new user account.

Treatment and Removal Costs. Use the Input button again and select Treatment and Removal Costs to customize cost estimates based on local contract costs. We ask for the following information:

- *Time interval*. This is the number of years over which you will spread ash tree removals and replacements. The default value is five years.
- *Treatment costs.* Specify the cost in dollars per inch to deliver a pesticide treatment. You can use the same price for all tree sizes or adjust costs to account for higher doses of pesticide (e.g., imidacloprid) recommended for larger trees.

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WISCONSIN DEPT. OF NATURAL RESOURCES

Volume 18
Number 3
Fall 2010

Inside this issue:

Save the Date
Annual Urban Forestry Conference & Trade Show
Jan. 30–Feb. 1, 2011
Green Bay, WI

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Community Profile:

Population: 8500

Tree City USA: 5 years

Growth Award: 2 years

Acres of Parks/Open Space: 315

Miles of Streets: 45

Program Profile:

Staff:

Director Parks, Recreation & Natural Resources

2 Public Works crews devoted to park and NR efforts

Equipment:

1 chipper

1 bucket truck

2010 Parks Budget: $214,980

2010 Natural Resources Budget: $63,938

Community Profile:

Village of DeForest

by Kelli Bialkowski, CPRP
Director of Parks, Recreation & Natural Resources

Welcome to the village of DeForest! Contrary to our name, DeForest is a community of 8500 residents who are committed to the forestation of our community, not "DeForestation." With our close proximity to vibrant Madison, we are a growing community with demonstrated commitment to our natural resources.

Thanks to the assistance of a WDNR Urban Forestry Grant, DeForest updated our tree inventory and management plan in 2008. The inventory recorded 3472 trees, a 363% increase from our previously noted 956 trees. The maple family makes up a large population of our urban forest canopy at 25%. We are currently working to increase our diversity through planting other species, particularly as we preemptively remove our ash population.

Since 2009, also with the help of a WDNR Urban Forestry Grant, DeForest has proactively removed 8–10% of its ash tree population. Efforts commenced by removing and replanting trees in poor condition or under power lines and have moved to removing trees that are less than 6"dbh. To educate the public about EAB we have decorated our website with EAB information and put out press releases, as well as spearheaded a Green Ribbon Campaign. The Green Ribbon Campaign involved approximately 30 volunteers tying green ribbons around all public ash trees. The tail of each ribbon directed people to our website where they were greeted with information about EAB. As of 2008, the village of DeForest was home to 455 ash trees. After our 2010 removal, our ash tree population will be reduced to 382 trees.

Photo: Village of DeForest

Not unlike other communities, keeping the public informed is one of top our priorities in DeForest. Our website has been a pivotal tool in connecting to people, from simple pieces such as hosting information about EAB and recommended tree species, to more complex tools such as GIS. New this year, and again thanks to a DNR Urban Forestry Grant, we are able to roll out GIS to be used internally as well as available for use by the public from our website. From an urban forest management perspective, the benefits of GIS are great. We are able to track tree maintenance, removal and replacement, condition, vacant sites and more. If the public has a question about the type of tree in front of their home, they can simply go to the website, type in their address and see the varieties of trees their property showcases.

DeForest's urban forest canopy extends beyond terrace tree plantings. With over 250 acres of conservancy lands, the village is home to natural communities, including riparian forests, upland forests, native prairie, wet meadow, sedge meadow, marsh and aquatic beds. Most recently, the village acquired 142 acres of environmental corridor along the Yahara River.

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Published quarterly by the Wisconsin Department of Natural Resources, Forestry Division.

Send your inquiries, address changes, or story ideas to Laura Wyatt, Laura.Wyatt@Wisconsin.gov (608-267-0568), or Dick Rideout, Richard.Rideout@Wisconsin.gov (608-267-0843).

Editors: Laura Wyatt and Dick Rideout
Contributors: Cindy Casey, Don Kissinger, Jeff Roe, Tracy Salisbury, Kim Sebastian, Candice Sovinski, and Olivia Witthun

Articles, news items, photos and ideas are welcome.

This newsletter is available in alternative format upon request and can also be downloaded in PDF format from our Web site: http://dnr.wi.gov/forestry/UF/

For breaking UF news, anecdotes, announcements and networking opportunities, sign up for The Urban Forestry Insider, DNR's bi-weekly e-bulletin. Archives are at http://dnr.wi.gov/forestry/UF/resources/InsiderArchive.html

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Emerald Ash Borer Update

by Bill McNee, Gypsy Moth Suppression Coordinator
DNR Northeast Region

The Wisconsin Emerald Ash Borer Program has released its urban ash management guidelines for reducing the impacts of emerald ash borer. The guidelines are available at www.dnr.wi.gov/forestry/uf/, and reflect the best science and experience currently available to minimize the impacts of EAB. It is up to individual local governments to adopt or adapt them as fits their situation and resources. Contact your DNR urban forestry specialist if there are questions.

A workshop, "Here Today, Gone Today: Mechanized Removal and Processing of Urban Trees," was recently held in the city of Oak Creek, Milwaukee County. The intent of this project was to determine the viability of using mechanized logging equipment in situations such as EAB management. Workshop attendees were able to see the equipment in action. Trees were cut in a variety of settings in the city, including streets, rights-of-way, private yards, parks and wooded natural areas. Approximately 500 trees were cut during the five days of the project and much of the wood is being sold as pulpwood or sawlogs. Data collected during the project will be analyzed in the upcoming months.

Here's what has happened to our known infestations/detections so far in 2010. For a current map of these areas contact Bill McNee, bill.mcnee@wisconsin.gov.

West Bend – infested trees found
Cudahy – one beetle trapped
Newburg – infestation size expanded
Franklin/Oak Creek – infestation size expanded
Kenosha – a second beetle trapped close to last year's trapped beetle
Victory – infestation size expanded
Green Bay – no additional beetles or larvae have been found since one beetle was trapped in 2009

If you see a purple EAB trap still hanging, please contact the Wisconsin Dept. of Agriculture, Trade and Consumer Protection (DATCP) by e-mailing Jennifer.Statz@wisconsin.gov. They want to make sure that all traps are removed. These traps did not find EAB in any new Wisconsin counties this year.

In the Newburg area (Washington/Ozaukee Counties), two group timber sales have been organized to harvest pulpwood and sawlogs from small properties infested with emerald ash borer. These are mixed-species sales with a majority of the trees being ash. The sales are from 44 total acres and have 7 participating properties that are not all adjacent. Both timber sales were successfully sold. The total volume sold for pulpwood was 431 cords and total volume sold for sawlogs was 34,000 board feet.

Beginning October 1, businesses with EAB compliance agreements can move regulated materials out of quarantined areas to compliant processing locations. This movement can occur until the end of March, and all transported items must be processed before April 30 to ensure that EAB adults do not emerge from the materials. If there are regulatory questions, contact DATCP by e-mailing Robert.Dahl@wisconsin.gov. For questions about the movement of regulated articles to other states, contact Joann.m.cruse@aphis.usda.gov. Sample compliance agreements can be seen at www.emeraldashborer.wi.gov; click on Resources at the top of the page.

Photo: Mark Guthmiller, WDNR.

Ash tree removed by processor in Oak Creek, WI.

Professor Ken Raffa, UW–Madison Dept. of Entomology, is leading a biological control project to introduce three natural enemies of EAB into Wisconsin. The three wasp species would help to reduce the EAB population by killing some of the eggs and larvae. The insects have been released in several states with established EAB infestations. Releases may occur in southeastern and western Wisconsin in 2011.

The three wasps are:

- *Oobius agrili* – lays its eggs inside EAB eggs
- *Spathius agrili* – lays its eggs on the outside of EAB larvae
- *Tetrastichus planipennisi* – lays its eggs inside EAB larvae

For more information on the national EAB biological control program and pictures of these natural enemies, visit www.emeraldashborer.info/files/EAB-FieldRelease-Guidelines2010.pdf.

A new US Forest Service publication co-authored by Bill McNee is now available. "Marketing Dead Timber in the Upper Midwest" can be downloaded at http://na.fs.fed.us/pubs/forest_products/marketing_timber/marketing_dead_timber_print.pdf.

A new multistate map of known EAB infestations is available at www.emeraldashborer.info/files/MultiState_EABpos.pdf.

Photo: WDNR

EAB Detection Trap

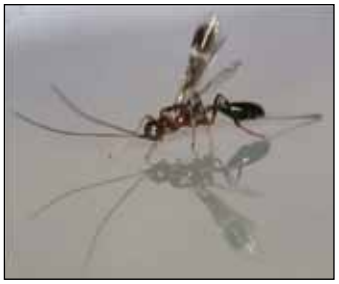

Photo: Tracy Ayer, USDA APHIS PPQ CPHST.

Spathius agrili adult.

Biological Controls for EAB: A Pewter Bullet

by Andrea Diss-Torrance
Gypsy Moth & Invasive Forest Insects Program Coordinator
DNR Division of Forestry

There's been some excitement about the potential for biological control of emerald ash borer now that three species of predatory insects are being released in sites around the current distribution of the pest. We've even gotten some hopeful calls from communities asking if they still should reduce the amount of ash in their urban forests. The short answer is, yes, we do have to move forward in reducing the preponderance of ash in our urban forests. Biological controls alone will not solve the EAB problem and it will take some time for them to spread throughout the range of EAB. They will be helpful, though, when they do arrive. Think of them as a pewter bullet rather than a silver bullet.

Currently, there are three species of parasitic wasps being reared for release in a federal government insectory. Production rate is low and each year only a few release sites can be supplied with enough of any one species to make an introduction that has a chance of success. These wasps are tiny and the distribution of EAB in Wisconsin is believed to be spotty, so natural spread of the wasps from introduction sites is expected to be slow. It is likely that EAB will arrive in your community before the biological controls do, so it is important to take steps in advance that will slow its rate of increase when it does arrive. Otherwise, EAB may explode though your ash population, rapidly destroying host trees and moving on in search of other ash before the parasitic wasps arrive.

Even under the best circumstances, these biological controls will not eliminate EAB. They are being introduced with the expectation that, in combination with other control measures, they will help slow the population growth of EAB enough that otherwise healthy ash trees may be able to survive a low level of infestation. While these parasites will increase in number with an increasing EAB population, if conditions are otherwise favorable to the pest, the parasites won't be able to stop EAB from killing infested trees. These biological controls also won't be able to protect trees against mass attacks by large numbers of EAB. For these reasons it is important for communities to do what they can to prevent conditions that favor rapid buildup of EAB populations. This includes:

- **Remove unhealthy ash**. Healthy ash have some ability to defend themselves against EAB until the internal population of the pest reaches the point where the tree's growth is slowed. This is one reason why EAB takes two years to mature early in the infestation. In weakened trees, maturation of the pest is faster and so is the rate of population growth.
- **Reduce the proportion of ash & thin out areas where ash is heavily concentrated**. This increases mortality among adult beetles from predation and mishap as they search for the next ash tree, thus slowing the insect's population buildup and spread in your community.
- **Consider using systemic pesticides on high-value ash to serve as "toxic traps."** This too will help increase mortality of adults and will waste their eggs on a host that is toxic to the hatching larvae.

Reducing the favorability of our urban forests for EAB is the first step in reducing the impacts this pest will have on our communities. Biological controls will be a second step towards living with EAB in the future.

Tree City USA Application Deadline December 31

The Tree City USA (TCUSA) program began in 1972 when Nebraska's Division of Tourism celebrated its centennial Arbor Day. As a result of this great success, the program went national in 1976, recognizing 42 TCUSA communities, both small and large, for their efforts in proper tree care and management. There are now almost 3200 Tree Cities across the country. Wisconsin boasts 181 **Tree Cities**, ranking us 3rd in the nation!

To be recognized as a Tree City USA a community must meet four requirements. It must have: 1) a designated tree board or forestry department, 2) an annual forestry program expenditure of at least $2 per capita, 3) a tree ordinance, and 4) an Arbor Day proclamation and observance.

New this year, the Arbor Day Foundation is converting to an online application, available at the **Arbor Day Foundation website**. A letter about the online application option was sent to recertifying TCUSA communities in October. The letter included a user ID and password for the online application. If you would like to apply online but have lost or forgotten your user ID and password, contact your **Regional Urban Forestry Coordinator**. Alternatively, you can still submit hard copy of the **Wisconsin application packet** during this year of conversion to the online format.

Whether submitting your application in hard copy or online, applications are due December 31. Awards are given the spring of the year following the completed application date.

Your community may have already met the four standards. If not, consult your regional urban forestry coordinator for assistance with developing your urban forestry program and soon you too can join the ranks of Wisconsin's Tree Cities!

First Downs for Trees

by Tom Tuner, Public Information Officer
DNR Northeast Region

In a project called First Downs for Trees, the Green Bay Packers have joined with Brown County-area municipalities, the Oneida Nation, Wisconsin Public Service Corporation and DNR Northeast Region's Urban Forestry Program to plant one tree in Brown County for each first down made by the Packers during their 2010 season.

The Packers "Green Team," the green side of the famed Green-and-Gold, came up with the idea and worked with DNR and Wisconsin Public Service to make it a reality. The Green Team hopes that at least 300 trees will be planted in the spring of 2011.

At a kick-off event June 30 at Skyline Park in Ashwaubenon, the Packers unveiled the tree-planting program and the 300-tree goal, then planted the first tree in the First Downs for Trees program.

In expectation of the Packers reaching the 300-tree goal, Packers President and CEO Mark Murphy observed that the Packers have a pretty explosive offense that can deliver 300 first downs this season. The Packers had 335 first downs last season and have averaged 312 per season since 2005.

In optimistic support of both the team and the project reaching their goal, DNR Northeast Region Director Ron Kazmierczak said, "We anticipate a lot more than 300 trees."

The Packers will pay for the trees, said their spokesman Aaron Popkey. DNR Northeast Region's urban forestry specialists Tracy Salisbury and Olivia Witthun were instrumental in developing the project. Salisbury said they hope to use local nurseries for the trees that will be needed for the spring planting.

The First Downs for Trees project is an effort by the Packers organization to reduce the carbon footprint created whenever the team travels. According to the team, the Packers release about 450 tons of carbon each season through air travel.

Photo: WDNR

Planting the first tree in the First Downs for Trees program are (left to right): Green Bay Packers President and CEO Mark Murphy; DNR NER Director Ron Kazmierczak; Wisconsin Public Service Corp. President Larry Borgard; Ashwaubenon Forester Tim Bauknecht (kneeling in green); Ashwaubenon Parks, Recreation and Forestry staff (in orange shirts); Green Bay Mayor Jim Schmitt; Brown County Executive Tom Hinz; Ashwaubenon Village President Michael Aubinger.

December 31 Deadline for UF Council Award Nominations

by Virginia M. Mayo Black, Communications Specialist
DNR Division of Forestry

The **Wisconsin Urban Forestry Council** is looking to recognize outstanding individuals, organizations, communities and tribes whose efforts have supported and furthered urban forestry in the state. Award winners are announced in February.

Wisconsin Urban Forestry Council Awards are presented in five categories:

- **Lifetime Achievement**, for outstanding contributions to Wisconsin urban forestry made throughout a lifetime career
- **Distinguished Service**, recognizing an individual for significant urban forestry contributions
- **Project Partnership**, for projects that utilize partnerships as a means of providing service or benefits to the urban forest
- **Elected Official**, recognizing an elected state, county or local official who has made a recent contribution to urban forestry in Wisconsin
- **Innovations in Urban Forestry**, recognizing a community, individual, association or organization that has exhibited innovation (creativity, commitment and success) in the development or enhancement of an urban forestry project or program

The deadline for nominations is December 31. Nominations should include the following information: award category or categories; complete contact information (including names, addresses and telephone numbers) for the individual(s), organization, group and/or project being nominated, along with contact information for the person(s) who can provide information about the nomination; and a description of the merits of the nominee and/or the achievements of the project or partnership, including any supporting documents (news clippings, photographs, letters, etc.) that show why the nominee is deserving of the award. If you know of an individual or project of merit but don't have the support materials, submit the name and contact information and the UF Council will follow up and request additional support materials. Information can be sent to the Wisconsin Urban Forestry Council, PO Box 7921, Madison, WI 53707, or e-mailed to **Laura Wyatt**, the Forestry Division's liaison to the council. Additional information about the awards is available from **council members** or from any of Wisconsin's **regional urban forestry coordinators.**

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Community Tree Profile:

Dawn Redwood (Metasequoia glyptostroboides)

by Laura G. Jull, Associate Professor & Extension Specialist
Dept. of Horticulture, University of Wisconsin–Madison

Photo: Edward Hasselkus, Professor Emeritus, UW–Madison

Dawn Redwood

Photo: Edward Hasselkus, Professor Emeritus, UW–Madison

Dawn Redwood

Native To: Interior China; first found in fossils in 1941 with a natural population found later that year growing in central China. The once-thought-to-be-extinct plant has fossil records dating back 50 million years.

Mature Height: 70–90' tall and can grow larger in its native habitat in China

Spread: 25–35'

Form: Tall, straight, central leader with a narrow, pyramidal, open form, becoming broad at the base of the plant with age. Branches are horizontal with wide branch angles from the trunk.

Growth Rate: Fast

Foliage: Deciduous gymnosperm with soft, feathery, flattened, linear, dark green, fine-textured needles borne directly on deciduous branchlets. Needles are 2-ranked, opposite and are longer than needles on baldcypress (*Taxodium distichum*).

Buds and Stems: Opposite, borne at the base of deciduous branchlets and appear stalked. Buds are easier to see compared to baldcypress buds. The deciduous branchlets are opposite, 3–4" long, green and pendulous and bear 50 or more needlelike leaves. The persistent branches are reddish brown to grayish brown with shreddy bark, carrying the deciduous branchlets.

Fall Color: Showy, russet brown to orange–brown occurring late in autumn

Cones: Monoecious (separate male and female strobili borne on one tree); male pollen "cones" are in pendulous, yellowish green racemes or panicles. The pendulous, rounded-to-ovoid, ½- to 1-inch-long, dark brown, woody, female cones resemble a tiny pine cone or redwood cone with numerous peltate scales. The cones are borne solitary on long stalks and mature in late summer to fall. Unlike baldcypress, dawn redwood cones do not disintegrate on the tree. The cone falls to the ground intact and does not become a litter problem.

Bark: Showy, reddish brown, fissured, with fibrous, long, narrow strips. Tree becomes buttressed at the base, with armpit-like depressions underneath the lower branches.

Site Requirements: Prefers full sun and a deep, moist, well-drained soil, slightly acidic to neutral pH. Dawn redwood can develop chlorosis in very high-pH soils. The tree is easy to transplant and is tolerant to wet soil but is intolerant to road salt.

Hardiness Zone: 5b

Insect & Disease Problems: Japanese beetles feed on the needles; some cankers, but generally disease-free.

Suggested Applications: Dawn redwood is an excellent specimen tree that can also be used in Japanese gardens, specialty gardens, or as a lawn, golf course, or park tree. It is a very ornamental tree in the landscape when environmental conditions are suitable. Dawn redwood looks especially appealing when planted in groves or along a stream.

Limitations: May grow late into autumn and become susceptible to frost damage. Squirrels are known to use the outer bark of dawn redwood for their nesting material, which can damage the tree. Japanese beetles will eat the foliage in summer. Sensitive to road salt and is very marginally hardy in Wisconsin, which may result in dieback of the tops of trees in severe winters. However, large, majestic specimens are thriving in south-central and southeastern Wisconsin. Branches are borne very low on the trunk creating a unique look, however, not suited for street tree use unless limbed up for vehicular and pedestrian clearance at a young age.

Comments: Dawn redwood is a beautiful, massive, deciduous tree for landscaping in residential and park areas. It is a low-maintenance, non-invasive, deer resistant tree. Its showy bark and branching and soft, feathery needles provide a nice textural component in the landscape. The fall color complements the cool, clear, blue skies of late autumn. A unique, living fossil tree, that is very fast growing and highly underused.

Common Cultivars or Selections:

'Gold Rush': also known as 'Ogon'; bright golden leaves all summer; foliage color can fade in heat of summer

Continued on p. 7

Save the Date!

WAA/DNR Annual Urban Forestry Conference & Trade Show

January 30 thru February 1, 2011 (Not Super Bowl weekend!)

Featuring:

Protecting Trees from Winter Damage
Gary Johnson, Univ. of Minnesota

Analysis of EAB Management Costs
Rich Hauer, UW–Stevens Point

Dealing with Change in the Workplace
Deb Schmidt, Loyalty Leader

Introductory Track, including: invasive species, inventories, pruning, insects/diseases & more

Climbers Corner

New This Year — Business Track

AND MORE!

Hotel Sierra & Convention Center, Green Bay, WI

Conference program will be distributed in December and available online at

Wisconsin Arborist Association

Dawn Redwood, continued from p. 6

'Jack Frost': variegated green needles with creamy white growing tips

'Miss Grace': smaller, weeping tree form with graceful, pendulous branches; smaller needles and branchlets; needs staking when young to develop height and drooping branches, otherwise it will grow on the ground

'National': narrow, spire-like form; selection from the US National Arboretum

'Niescke Cream': dwarf, upright form; new growth in spring is white fading back to green; can burn in sun

'Sheridan Spire': uniform, narrow, upright form; compact, but does become a large tree

'Spring Cream': variegated green needles with a creamy yellow overcast in early spring

'Waasland': narrow, upright form; large tree

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North American Landscape Trees, 1996, by Arthur Lee Jacobson, Ten Speed Press, Berkeley, CA.

Plants that Merit Attention: Vol. 1 Trees, 1984, The Garden Club of America, Janet Meakin Poor, (ed.), Timber Press, Portland, OR.

Trees for Urban and Suburban Landscapes, 1997, by Edward F. Gilman, Delmar Publishers, Albany, NY.

What Damaged This Tree?

Turn to page 15 to find out. . .

Photo: Olivia Withun, WDNR

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Urban Tree Health Matters:

Notes from the Plant Disease Diagnostics Clinic— So Long and Farewell to a Wet and Wonderful(?) 2010

by Brian D. Hudelson, Director
UW–Madison Plant Disease Diagnostics Clinic

Photo: PDDC

Figure 1. Tar spot of maple.

Photo: PDDC

Figure 2. Cedar–hawthorn rust on pear.

The 2010 growing season was a plant pathologist's dream. The regular rains that blanketed much of the state throughout the summer of 2010 provided a perfect environment for many types of plant diseases. In particular, I noted more numerous and severe cases of many foliar diseases.

Perhaps the most easily recognizable of the leaf diseases that passed through the Plant Disease Diagnostics Clinic (PDDC) was tar spot (Figure 1). This is a primarily cosmetic disease that I most commonly see on maple leaf samples arriving from counties that border or are near Lake Michigan. Several species of the fungus *Rhytisma* can cause tar spot, and typical symptoms include formation of approximately one-inch-diameter, tarry black, slightly raised areas on affected leaves. On close inspection, there appears to be a fingerprint-like pattern in the middle of the tarry mass. In some examples of this disease that I received this summer, there were large numbers of infections on each leaf, to the point where the surrounding leaf tissue bleached and dried. Control of tar spot relies primarily on removal of infected leaves in the fall to remove the source of fungal spores that might infect a tree the following growing season. Fungicides (in particular copper-containing products) are labeled for tar spot control, but I typically do not recommend fungicide treatments due to the cosmetic nature of the disease.

Another distinctive group of diseases that I saw in the PDDC this summer were the *Gymnosporangium* rusts (e.g., cedar–apple rust, cedar–hawthorn rust, cedar–quince rust). These are rust diseases where the pathogen spends part of its life cycle on junipers (red cedars are particularly susceptible) and the other part of its life cycle on woody roseaceous plants such as apple, crabapple, hawthorn and quince. On junipers, the pathogens induce the formation of galls. The most distinctive of the *Gymnosporangium* galls form bright orange, marmalade-like masses in roughly mid-May to mid-June. These masses produce spores that infect woody rosaceous hosts. On rosaceous host leaves, bright orange spots form in mid-summer. Pinpoint-sized, black fruiting bodies (reproductive structures) form in the center of the spots on the upper leaf surface and tendril-like fruiting structures that hang from beneath the leaves form under the spots. Of particular interest in 2010 was a sample of cedar–hawthorn rust that I saw on pear (Figure 2). I had never seen any of the *Gymnosporangium* rusts on this host in the past. Control of *Gymnosporangium* rusts is most commonly achieved by growing only one host (either junipers or rosaceous hosts) within a given landscape. Mixing of the two types of hosts is possible if resistant junipers are used. In particular, Chinese junipers (*Juniperus chinensis*) varieties tend to have relatively high levels of resistance to *Gymnosporangium* rusts.

Continued on p. 13

Coming Events

January 4, 2011 – *The Trend Towards Green: The Science and Application of Organic Practices in the Green Industry* (Super Tuesday event in conjunction with Northern Green Expo), Minneapolis Convention Center, Minneapolis, MN. Visit http://northerngreenexpo.org/.

January 5–7, 2011 – *Northern Green Expo*, Minneapolis Convention Center, Minneapolis, MN. Visit http://northerngreenexpo.org/.

January 12, 2011 – ***Coniference: Everything You Wish You Knew about Diagnosing Conifer Diseases***, Minneapolis Parks & Recreation Board Headquarters, Minneapolis, MN. Visit www.rainbowtreecare.com/institute/.

January 14–March 25, 2011 (Fridays) – *Arborist Certification Training,* Urban Forestry Institute, Minnetonka, MN. Visit www.urbanforestryinstitute.org.

January 19–21, 2011 – *Mid-America Horticultural Trade Show*, Navy Pier, Chicago. Visit http://www.midam.org/.

Urban Forest Insect Pests:

Red Humped Caterpillar

by Linda Williams, Forest Health Specialist
DNR Northeast Region

Red humped caterpillar (*Schizura concinna*) is a native insect. The caterpillars feed on a variety of tree species, including aspen, birch, cherry, walnut, willow, apple and more. Adults emerge in the spring, mate, lay eggs and the caterpillars hatch in the spring. There can be more then one generation per year. The final generation of the year will drop to the ground, pupate and spend the winter in a cocoon.

Red humped caterpillar should not be confused with a different species with a very similar name, the redhumped oakworm (*Symmerista canicosta*) which does periodically cause widespread defoliation. Red humped caterpillars have yellow and black stripes that run the length of their body; they have a red head and an enlarged red hump on the segment immediately behind the true legs near the head of the caterpillar. Adult moths are small, brown and somewhat nondescript.

Photo: Linda Williams, WDNR

Red humped caterpillar with hind end raised in defensive posture.

When small, the caterpillars feed as a group and skeletonize the underside of leaves. Older caterpillars defoliate leaves completely, leaving only the mid-veins. For light infestations no control is necessary, and parasitic wasps and generalist predators will help keep the populations in check. If insecticide control is necessary, an application of Bt (*Bacillus thuringiensis* var. *kurstaki*) can be very effective against younger caterpillars.

Forest Health Updates - Your link to insect and disease pests in your region

Northern Region
Fall 2010 issue

Northeast Region
November 2010 issue

Southern Region
October 2010 issue

West Central Region
September 2010 issue

January 29, 2011 – *Toward Harmony with Nature Conference*, Oshkosh Convention Center, Oshkosh, WI. Visit www.wildones.org/chapters/foxvalley/.

January 30–February 1, 2011 – *WAA/DNR Annual Conference and Trade Show*, Hotel Sierra/KI Convention Center, Green Bay, WI. Visit www.waa-isa.org/calendar_of_events.asp.

February 2, 2011 – *Wisconsin Nursery Association Winter Workshop*, Country Springs Hotel, Waukesha, WI. Call 414-529-4705.

February 6–10, 2011 – *Tree Care Industry Association Winter Management Conference*, The Westin Casuarina Resort & Spa, Grand Cayman Island. Visit www.tcia.org.

February 17, 2011 – *Rochester Arborist Workshop*, Rochester International Event Center, Rochester, MN. Visit http://rochesterarboristworkshop.com/winter_workshop.html.

February 19–22, 2011 – *North American Tree Conference*, Savannah International Trade & Convention Center, Savannah, GA. Visit http://isasouthern.org/.

March 15–16, 2011 – *Minnesota Shade Tree Short Course*, Bethel University, Arden Hills, MN. Visit www.mnstac.org/events_news.html.

If there is a meeting, conference, workshop or other event you would like listed here, please contact Cindy Casey. Please see back cover for contact information.

10

Survey Says. . .

by Laura Wyatt, Urban Forestry Communication Specialist
DNR Division of Forestry

Tree diversity in our communities and private landscapes is severely lacking. According to a 2002 pilot monitoring project of Wisconsin's urban forests, ash and maple comprise 43% of the urban forest. This sets up communities for catastrophic loss to exotic diseases and insects. Many of us can still remember the impact of Dutch elm disease on our communities. Unfortunately we may soon experience a similar loss due to emerald ash borer.

As tree, nursery and landscape professionals we know diversity is good, but why isn't it happening? To learn more about the barriers to tree diversity, DNR urban forestry staff surveyed green industry professionals at the 2010 Wisconsin Nursery Association Summer Field Day. The survey is not a scientific instrument but a tool to gather informal comment and perceptions. Forty-one surveys were completed at the field day or returned online. Sixty-three percent were completed by wholesale and/or retail nurseries, 12% by arborists, 12% landscape professionals, 6% exclusively garden center operators and 7% other. Here is a summary of responses to the five survey questions:

How can we encourage the public sector (municipalities, etc.) and/or the private sector (homeowners, developers, golf courses, etc.) to plant a more diverse population of trees?

- **62% - Education**. "We must educate our clients why there is a need and the reasons for us to diversify." "Through public announcements, working with nursery industry & non-profits."
- **15% - Demonstrations**. "Show them examples of plants that work and places where they are working."
- **15% - Incentives**. "Offer growing contracts between municipalities and private companies." "Incentives for communities who follow a diversified plant menu."
- **8% - Other**

Why aren't people planting a greater diversity?

- **57% - Lack of Knowledge**. "People unaware of alternatives." "Marketing dollars are spent on a small segment of genera and species in order to create a hype over just a few crops."
- **26% - Apathy**. "Frustration with more specific requirements than ash." "Suppliers & landscapers are in a rut of using what they know works." "People are going to plant based on their good experiences." "Afraid to venture out." "Comfort of the ordinary." "Plant prejudice."
- **11% - Price**
- **6% - Availability**. "Alternatives not available in quantity." "Supply isn't always there and it takes more effort to do it that way."

What are the barriers?

- **59% - Lack of Education**. "People have set ideas – change only happens thru education."
- **16% - Apathy**. "We need to get people out of their comfort zone to try new and different varieties. Education of the customer is key!"
- **8% - Money**. "Growers like producing fewer large crops to make production cheaper and easier."
- **8% - Availability**. "Poor choice of tree varieties." "Sources of propagation material."
- **6% - Other**. "I feel there really isn't any barriers as our clients trust us for direction so the ball falls back in our court to educate and design and install a wider variety of trees."
- **3% - Fast growing**. "The big-box stores advertise fast-growing species and people want instant satisfaction, so they buy what's cheap and fast for their money."

How can we create demand for greater diversity?

- **59% - Education.** "Remind people of DED and EAB" (3 responses); "Play to people's competitive nature in the private sector and try to encourage people to beat the neighbors by not having the same landscape."
- **15% - Marketing.** "Get the wholesale & retail industry behind your ideas – they'll promote." "By getting info out to nurseries on different species."
- **13% - Grower support (research/trials).** "Partner with propagation nurseries or universities to increase plant choice and growing knowledge." "Research ways to produce the harder-to-grow trees easier, fewer inputs."
- **5% - Other**
- **5% - Demos/Tours**
- **3% Availability.** "Change the supply."

What success have you had in encouraging the planting of a more diverse landscape?

- **69% - Success by educating our clients.** "A lot of successes. Change the cookie-cutter designs and it's not hard. If you're the installer or buyer of the product and you're doing the design, there are all kinds of stuff one can do without maple and ash." "We suggest the plants we feel work best and people often listen and agree." "People more open since they have heard about ash borer—willing to try something different." "We have been quite successful in encouraging our clients to try species and cultivars that have been not been used widely. It is part of our nursery's mission to constantly be looking for the best plants for our area to produce and sell. On occasion we even develop and select a few ourselves." "We have been very successful the past

years as the need and desire for something different has helped. Plus we have worked hard with our client base to educate the problems we have had with certain variety of trees and the importance of using other varieties other than the standards. I feel as an industry if we can continue to propagate new varieties will be a help encouraging our client base of the availability and value in these trees."

- **9% - Fair success**
- **9% - No success**
- **7% - Other**. "I sell what the landscaper wants."
- **6% - Availability**. "Offer greater selection of plants."

Parting Thoughts

What can YOU do now? As with so many things in life, increased knowledge and education have been identified as avenues to success. Recognizing the pending peril our community forests face due to the lack of diversity also needs to be articulated. If there can be a "silver lining" to EAB, it may be greater awareness for the need to diversify tree planting.

Sixty-nine percent of survey respondents reported success in diversifying tree planting by educating their clients. While I can't argue that a full-blown marketing campaign wouldn't be helpful, I realize that would take planning, dollars and time to coordinate. What you can do now is ensure your staff and clients are aware of the potential threats facing community forests and the need to plant a diversity of trees. Increase your knowledge of the diverse assortment of plants you handle and share that information with your customers. Many folks are aware of EAB and are hungry for information. Become the trusted source for tree-related information. The Wisconsin Nursery Association sponsors a Wisconsin Plant of the Year program which can be an excellent starting point.

No doubt there is a lot we can do to move this issue forward by working together. If you are interested in continuing the conversation and helping to move beyond the survey, please contact me at **Laura.Wyatt@wisconsin.gov**.

A complete transcript of survey responses is available upon request.

Congratulations to **Vanessa Mueller** of **Johnson's Nursery**, the recipient of two tickets to the UW Men's basketball game. Her name was drawn from those individuals who responded to the survey. Go Badgers!

Final Words. . . Jeff Edgar, Silver Creek Nurseries

"This survey was very interesting and offered a personal outlet for some of the ideas I've been chewing on for a while. Issues like these and their solutions should be shared with as many people in the affected industries as possible. I'm sure they would offer great topics of discussion in an open forum, such as an industry listserve network. This issue and others just scream for the Green Industry in Wisconsin or the Upper Midwest to initiate this type of free-flowing forum. From what I understand, a listserve would be easy to set up and administer. ANLA Connect (national list serve for the American Nursery and Landscape Association) is just one example of a format for sharing ideas that is offering a great benefit for our industry nationally. A regional or local listserve could also be a powerful tool to promote the idea of diversity and improve the overall knowledge of our industry. The better the communication, the better the chances are for understanding the issues and solutions to the problems.

Regarding the issue of maples in the urban landscape, I do understand there are lots of maples planted in cities. Until there is a pest that will destroy these trees, as DED or EAB, maples should continue to be planted but maybe at a lower percentage than what's currently in the landscapes. Should we stop planting honeylocust because of canker diseases? How about linden, with their borer problem, pears, with their threat of invasiveness, *Malus* with their disease problems, oaks and coffeetrees with their acorns and seed pods? Every tree has its Achilles' heel. Unless we decide to plant umbrellas to supply our shade, we have to deal with the reality of every living thing having its pests. Offering more choices, with consistent supplies and quality, will be a big step towards a more diversified urban forest."

2010 Woody Ornamental Plant of the Year

The 2010 Woody Ornamental Plant of the Year is the *Quercus muehlenbergii* (chinkapin oak). A large shade tree with unique chestnut-like leaves, *Quercus muehlenbergii* turns a deep yellow to orange-brown in autumn, contrasting well with its rough, ashy gray bark. Its acorns are highly prized by wildlife. The chinkapin oak prefers full sun and can grow in dry and heavy clay soils. Since it is tolerant of urban environments and adaptable to most soils and pH levels, it makes a great choice as a replacement for ash trees on some sites. Because it is in the white oak group, it is not as susceptible to oak wilt as those in the red oak group. The chinkapin oak grows to a height of 40 to 60 feet tall with an equal spread. It is native to Wisconsin and hardy to zone 4b.

Check the Wisconsin Green Industry Federation (**http://www.wislf.org/**) website to find out what the Wisconsin Nursery Association will name as the 2011 Plants of the Year.

12

TREE CITY USA

Wisconsin 2009 Tree City USA Accomplishments

181 Tree City USA Communities—3rd in the nation!

- **5** first time communities
- **97.7%** recertification rate
- **23** Tree City USA Growth Award recipients
- **59%** of Wisconsin's population live in a Tree City USA
  - Largest community: Milwaukee, WI (604,477)
  - Smallest community: Pound, WI (336)
- More than **$39 million** spent by Tree City USA communities in Wisconsin on urban forest management
- Median per capita expenditure for Community Forestry Program in Wisconsin: **$5.24**
- Average per capita expenditure for Community Forestry Program in Wisconsin: **$11.87**

TREE CITY USA

EAB Cost Calculator, continued from p. 1

- *Treatment interval*. Under the Treatment Costs section, indicate the frequency at which you will apply pesticides. Select one year between treatments for imidacloprid, and two or three years if applying emamectin benzoate.
- *Replacement cost*. This is the price you would pay to purchase, plant, stake and mulch a tree after the old tree has been removed.
- *Removal costs.* This is a size-based schedule for the price of removing a tree and grinding the stump.
- *Discount rate.* In order to make projections in today's dollars you need to account for the cost of money. This should be the rate of return that you could get on the money if you invested it rather than spent it on managing your ash trees. We suggest using a 3% discount rate.
- *Mortality rate*. This function is still under development. Just ignore it.

Management Plans. The calculator has seven default management plans that range from simply removing, replacing or treating all ash trees to some standard combinations of treatment and replacement. This includes treating the small trees up to 12" (Replace >12) or the large trees with a diameter greater than 24" (Replace <24). Each of the default plans are named, described and justified. The name of each management plan, a description and why it is important will appear on the printed report. You can create a new management plan for each combination of trees you want to treat with insecticide, remove or replace. For each new plan, you can enter any name you choose, describe it and explain why it is important.

Making Comparisons. By selecting the Comparisons button on the left, or the View Comparisons Now button at the bottom of the Management Plans screen you can compare plans for a 25-year period. You will be able to examine annual costs, cumulative costs and total diameter over time. The Total DBH graph gives the sum of the diameters of all treated ash trees and replacement trees. We assume that trees add approximately 0.45" diameter each year. While this is a high estimate for newly planted or older trees, and a low estimate for mid-size trees, it provides a handy approximation for comparison purposes. You can compare up to three management plans at a time by simply clicking on the strategy you want under Option 1, 2 or 3 at the top of the page. If you scroll to the bottom of the screen you can get specific values from any of the graphs for any of the years you wish.

Printing and Sharing Reports. You can print written reports complete with your name, the forest name, management plan explanations and tabular summaries for any three management strategies by clicking on the Print button near the bottom or top of the page. To share the report electronically, just print it to a PDF file using Adobe Acrobat. This creates an electronic copy you can e-mail or post on the Web.

Urban Tree Health Matters, continued from p. 8

A disease that is common every year, but was particularly severe in 2010, was **apple scab** (Figure 3), as well as its relative pear scab. These diseases are caused by two very similar species of the fungus *Venturia* (*V. inaequalis* and *V. pirina* respectively). Both pathogens tend to cause multiple infections on leaves. Individual lesions tend to be black and roughly circular with feathery edges. Heavy colonization of the leaves by the pathogen often gives the leaves a sooty appearance. Eventually, if the disease is severe, leaves yellow and defoliation of an entire tree can occur. Infections can occur on fruits as well, leading to the fruits having a scabby appearance (thus the name of the disease). Severe scab can lead to fruit cracking, and cracked fruits tend to store poorly. When clients ask me about control of scab, my first question if how emotionally attached they are to their particular apple or crabapple tree. If the client is indifferent, then I recommend removal of the tree and replacement with a newer apple or **crabapple variety** that has scab resistance. If a client wants to maintain an existing scab-susceptible tree, then removal of infected leaves in the fall, pruning of branches to promote better airflow and more rapid leaf drying during the growing season, and routine fungicide treatments (every 7 to 14 days) are needed. Fungicide treatments must be started as soon as a tree begins to leaf. Typically, when clients find out how much work spraying an apple or crabapple can be, they quickly reevaluate how attached they are to their tree.

Powdery mildews were also quite common in 2010. This was a little surprising, as powdery mildew fungi do not like wet leaves, but prefer dry leaves with high relative humidity along the leaf surface. Given the amount of rain this past summer, I would have expected the weather to be far too wet for substantial powdery mildew activity. However, there appears to have been sufficient periods of dry weather with high humidity to allow for infections by powdery mildew fungi, and I saw numerous samples of the disease over the course of the summer. The most interesting of the powdery mildews that passed through the PDDC was *Sawadaea tulasnei,* a powdery mildew pathogen of Norway maple (Figure 4) that was first described in Wisconsin in 2007. I received numerous samples of this powdery mildew from the southeast part of state, oftentimes on leaves also showing symptoms of tar spot. I have yet to see this powdery mildew on a maple other than Norway maple. However, there is concern that the pathogen may "jump" to other maple species. If it does, it is unclear what impact this might have. If you see examples of what you think is *Sawadaea* powdery mildew, feel free to send in a sample for verification (at no charge). I continue to be interested in the distribution and spread of *Sawadaea tulasnei* in the state.

A late entry in the leaf disease pantheon for 2010 was **Dothistroma needle blight**, the most common needle blight that I see on Austrian pine (Figure 5). Numerous samples of this disease arrived at the PDDC in October and November. The pathogen that causes this disease (*Dothistroma pini*) initially causes a spotting symptom on needles. The pathogen eventually girdles the needles, oftentimes producing a distinct band, and the needles, from the point of infection to the tip, die. Normally this dead tissue has a yellowish brown color. What was unusual about Dothistroma needle blight in 2010 was that the needle discoloration tended to be a bleached-tan to an almost white color. Luckily, the distinctive fruiting bodies and spores of *Dothistroma pini* were present in the needles, helping confirm the diagnosis. Perhaps the best control of Dothistroma needle blight is to not plant Austrian pine (a problematic tree species from the perspective of several diseases) and to remove existing severely diseased and aesthetically unappealing trees (i.e., those with over 40 percent of the canopy affected). For clients who opt to keep their diseased Austrian pines, I recommend opening up the airflow around the tree (by removing branches on the diseased tree, or removing surrounding trees), removing and destroying infected needles that have fallen around the base of the tree, and applying fungicide treatments to help provide control. Copper-containing fungicides are the products of choice for Dothistroma needle blight management and two applications (one in mid-June, the other three to four weeks later) are typically required.

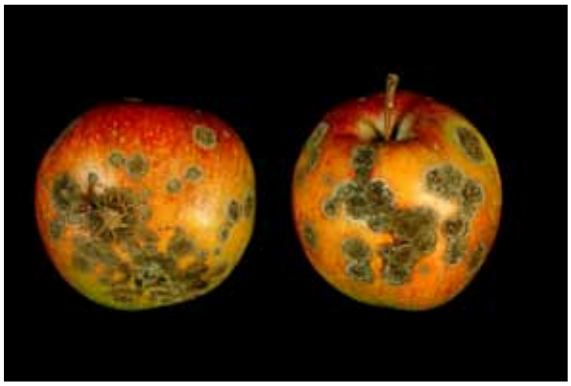


Photo: PDDC

Figure 3. Apple scab on apple fruit.

Photo: PDDC

Figure 4. Powdery mildew (caused by Sawadaea tulasnei) of Norway maple.

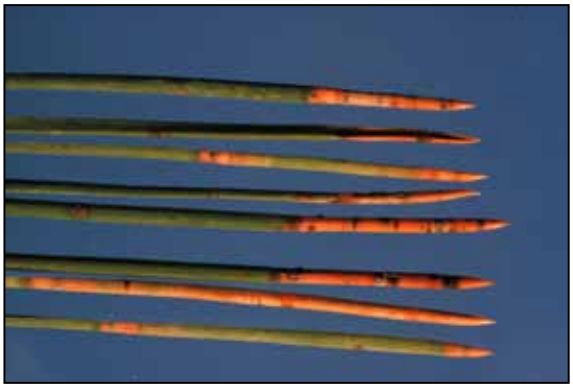


Photo: PDDC

Figure 5. Dothistroma needle blight on Austrian pine.

With the 2010 growing season having come to a close, it is time to look forward to 2011. Keep your eye out for new and unusual diseases. If you see anything that strikes you as unusual, feel free to submit a sample to the Plant Disease Diagnostics Clinic. Details on sample submission are available at **http://pddc.wisc.edu**.

14

Does your community or organization have an idea, project or information that may be beneficial to others? Please let your regional urban forestry coordinator know. We will print as many of these as we can.

The Idea Exchange…

compiled by Olivia Witthun, Urban Forestry Coordinator
DNR Southern Region

Fruit Trees on Public Land

The mission of the nonprofit Fruit Tree Planting Foundation is to plant edible fruit trees and shrubs to benefit the environment and its inhabitants. FTPF programs donate strategically located orchards where the harvest will best serve communities for generations to follow, at places such as public schools (Fruit Tree 101), city parks and community gardens (Communities Take Root), low-income neighborhoods and international hunger relief sites (Fruit Relief), Native American reservations (Reservation Preservation), health centers (Roots of Recovery), and animal sanctuaries (Orchards for Animals). Here in Wisconsin, Madison's own Midvale Elementary School was a recipient of the Fruit Tree 101 program in 2007. Several Chicago schools and the city's Kilbourn Park also received fruit trees over the past few years. Not only do these trees provide environmental benefits and edible fruit for nearby residents, there are countless educational opportunities associated with the orchards.

Info: **Info: www.ftpf.org/index.php**

Builders Must Save More Trees

Charlotte, NC, changed its tree ordinance to increase the number of trees that must be saved in commercial and apartment complex developments. Most of the ordinance changes were driven by alarm over the area's rapid urbanization. The city has lost half of its tree canopy in the past 25 years. Some of the more significant changes include: an increase in the amount of trees saved on commercial development from 10 to 15 percent, Tree Save areas must be free of invasive plants, a decrease in spacing between trees from 60 to 40 feet in parking lots, and a requirement that 50 percent of new trees be native species and represent diversity.

Info: **http://actrees.org/site/news/newsroom/new_rule_builders_must_save_more_trees.php#me**

Green Infrastructure for Managing Wet Weather

Looking for ideas to implement green infrastructure in your community? Information on green streets, parking lots, planter box design, vegetated swales, rain gardens, permeable pavement and more can all be found on the US Environmental Protection Agency website. There are numerous links to green infrastructure types, applications and design approaches for managing wet weather.

Info: **http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm#planterboxes**

Urban Forest Management Plan Online Toolkit

A free online resource is now available for developing urban forest management plans. The Urban Forestry Management Plan (UFMP) toolkit website is a reference and framework for developing a plan. It also provides online tools for working collaboratively with a group to develop the plan. Typical users include city foresters, parks managers, planners and other managers of large property. The UFMP toolkit is a fairly new resource. If you do use it, consider sharing your experience with your WDNR regional urban forestry coordinator.

Info: **http://ufmptoolkit.com/index.htm**

Photo: Village of DeForest

DeForest, continued from page 2

To direct management actions within the conservancy lands, the village hired Taylor Conservation to develop a management plan and ecological assessment. The village has been using these plans since their inception in 2008.

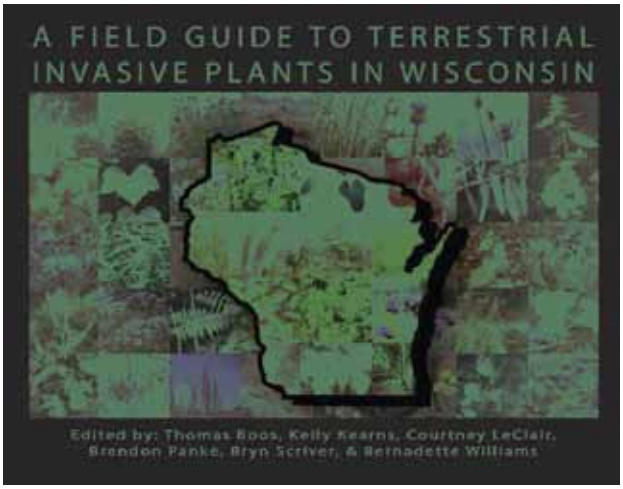
One of the projects the village has initiated is a partial oak savanna restoration along the Yahara River. This project involved removing exotic brush (primarily buckthorn and honeysuckle) and non-oak trees that were directly crowding oaks. Upon removal of brush we conducted a prescribed burn and will likely scatter some prairie seed in the spring of 2011. The goal of the project is to enable park users to better view the beautiful canopies of the mature white oaks.

Another current project involves a partnership with Operation Fresh Start conservancy crews. OFS is a youth development program addressing issues facing low-income communities, where young people work toward their GED or high school diploma, learn job

Urban & Community Forestry Program Resources:

Terrestrial Invasive Plants in Wisconsin

compiled by Cindy Casey, DNR West Central Region
DNR West Central Region



Several new pictorial references on terrestrial invasive plants are available to order or download from the Wisconsin DNR website, http://dnr.wi.gov/invasives/plants.asp.

A Field Guide to Terrestrial Invasive Plants in Wisconsin – provides descriptive profiles, identification and control information for nearly 50 invasive trees, shrubs, vines, forbs and grasses

Common Terrestrial Invasive Plants in Wisconsin – a quick reference sheet for the 32 most common terrestrial invasive plants

Regulated Terrestrial Invasive Plants in Wisconsin – a quick reference sheet for terrestrial plants regulated by Wisconsin's new Invasive Species Rule (NR 40); for more information about NR 40, see www.dnr.state.wi.us/invasives/classification/.

DeForest, continued from page 14

skills, and serve their communities. Here, OFS crews will focus on projects in two different natural communities. In one area, teams will cut and pile invasive brush, opening up views to a high-quality sedge meadow. In another location crews will cut and pile brush in a riparian forest to open up views of the Yahara River. By bringing park users closer to their natural resources we hope to cultivate an appreciation, thus stewardship, for the urban forest and Yahara River. In both cases the brush piles will be burned during snow cover.

As the Village of DeForest moves forward in advancing urban forestry and other natural resource initiatives, outreach will be central to our efforts. We hope to continue in partnerships like that of Operation Fresh Start to augment objectives that involve field work.

Equally important to labor partnerships are funding assistance opportunities, like the DNR Urban Forestry Grants. Networking has also been invaluable to us. I experienced first-hand the value of sharing experiences at the Community Tree Management Institute, organized by the DNR. Over a series of three, 2-day workshops, community tree managers from all over Wisconsin gathered to sharpen our skills on managing our respective urban forests. The institute was fully furnished with a lineup of academically related forestry information, applied practice opportunities, operations evaluations and insight, and most useful to me, an opportunity to reach out to urban forest managers in similar-sized communities to learn from their successes and challenges. Together, we can make resources work harder, which is an asset to all natural entities, including the human kind.

15

What Damaged This Tree?

Photo: Olivia Withun, WDNR

Several apparent and presumed factors are contributing to the decline of these flowering crabs: severely restricted rooting space, drought stress due to extensive impervious surface, poor drainage in lower rooting zone from compaction and other soil properties, elevated deicing salt concentration from parking lot plowing, elevated soil pH due to calcium leaching from concrete and rock mulch, and excessive heat from sun reflection off paved surfaces. Is is any wonder such planting sites are commonly called tree coffins?

Wisconsin Urban & Community Forests
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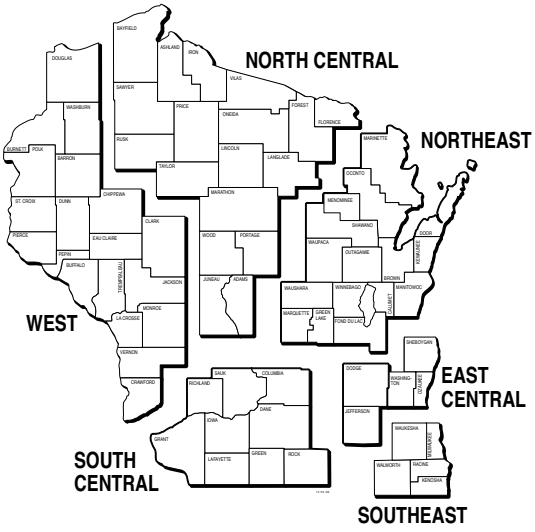

World Wide Web Site: http://dnr.wi.gov/forestry/uf/

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